

10/631,098

**REMARKS**

Claims 14, 15, 17-20, and 22, and 24-36 are all the claims pending in the application. Claims 9-13 and 23 are canceled, above, as being directed to a non-elected species. Claim 16 is canceled, above, as being redundant of claim 14. Claim 21 is canceled, above, and rewritten in independent form as new independent claim 24. In addition, claims 25-36 are added, above, to further define the invention. All of the newly added claims are found within the elected species shown in Figures 5 and 6. Of the remaining claims, claims 15, 19, 20, and 22 are withdrawn from consideration. Claims 14, 17, and 18 stand objected to upon informalities and rejected on prior art grounds. Applicant respectfully traverses these objections/rejections based on the following discussion.

**I. The Claim Objections**

Claims 14, 17, and 18 are objected to because of the inconsistent usage of the term "circuit control network". In order to address this objection, claims 17 and 18 have been amended to consistently use the term "circuit control network". Further, withdrawn claims 15, 19, 20, and 22 have been similarly corrected. While claims 15, 19, 20, and 22 are not currently being examined, they depended from potentially allowable independent claim 14 which is being examined. Therefore, the Examiner is respectfully requested to enter the amendments to withdrawn claims 15, 19, 20, and 22 so that if independent claim 14 is allowed, claims 15, 19,

10/631,098

20, and 22 will not be objectionable. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this objection.

## **II. The 35 U.S.C. §112, Second Paragraph, Rejection**

Claims 14, 17, and 18 stand rejected under 35 U.S.C. §112, second paragraph. The Office Action states that the term "resistive/capacitor" in claim 14 is indefinite. In response, claim 14 has been amended to define "an RC discriminator comprising a resistor and a capacitor" to clarify that the discriminator is an RC device. In addition, in the rejection of claim 21, the Office Action states that it is not clear how the control network can include the various elements recited. In response thereto, claim 21 is rewritten in independent form as independent claim 24 and has been clarified to explain the relationship among the claims elements. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw these rejections.

## **III. The Prior Art Rejections**

Claims 14, 17, and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Williams (U.S. Patent No. 5,682,050), in view of Brady, et al. (U.S. Patent No. 5,314,841), hereinafter referred to as Brady. Applicant respectfully traverses this rejection because the references are not properly combinable and because the prior art of record does not teach or

10/631,098

suggest the inventive RC discriminator or the inventive circuit control network defined by independent claim 14.

More specifically, Williams does not disclose an RC discriminator and also does not disclose that the gate is connection to the RC discriminator at a point between the resistor and the capacitor. Brady is utilized merely to demonstrate that silicon over insulator technology is well-known and is not utilized (and does not teach or suggest) any features of the inventive RC discriminator.

Independent claim 14 defines "an RC discriminator comprising a resistor and a capacitor, wherein said RC discriminator is connected to said gate at a point of said RC discriminator between said resistor and said capacitor." This feature is shown in both of Applicant's Figures 5 and 6 where the line connected to the gate 45 is also connected to a point between the resistor 42 and the capacitor 41. To the contrary, as shown in Figure 13A of Williams, only a resistor  $R_G$  is connected to the gate of transistor M and an RC structure is not illustrated in Williams. Therefore, it is Applicant's position that Williams does not illustrate the claimed RC discriminator and does not illustrate that the gate is connected at a point of the RC discriminator between the resistor and a capacitor.

In addition, it is Applicant's position that a prima facie case of obviousness has not been set forth because, in this instance, Brady is not properly combinable with Williams. The Office Action proposes to combine Brady with Williams to show that the technology within Williams could be extended to SOI technology. However, this combination is not reasonable given that the invention is directed toward controlling the body potential of an SOI transistor and that the

10/631,098

teachings of non-SOI technologies are not generally transferable to the floating bodies of SOI structures. Further, as described in detail below, if the device in Williams were transferred to the SOI technology field, this would destroy the operability of the device in Williams because Williams relies on the body being non-floating. When the proposed combination of references destroys the operability of one of the references, this indicates that the proposed combination would not have been made by one ordinarily skilled in the art.

Non-SOI structures do not insulate the body from the underlying substrate, while in SOI structures the body is insulated (floating). The technologies with respect to the body potential are fundamentally different, and teachings relating to bodies of non-SOI structures generally cannot be transferred to the floating bodies of SOI structures because of the fundamental difference regarding the body potential. While SOI technologies present substantial advantages over non-SOI technologies (because of the floating body) SOI technologies also present a number of impediments which were not present in non-SOI technologies (also because the body is floating). Generally non-SOI technologies cannot be transferred to SOI technologies, unless compensation is made for the floating body. Therefore, simply referring to Brady as disclosing an SOI structure, and then concluding that all the non-SOI teachings in Williams can readily apply to an SOI structure is not reasonable given that the structure in Williams must be modified significantly in order to be functional within the SOI technology environment. Indeed, simply transferring the structure shown in Williams to an SOI environment would render the operation of the device in Williams non-functional because Williams relies upon the body being non-floating in order to have the device properly operate. Thus, because the proposed combination

10/631,098

destroys the operability of the Williams reference, Applicant's submit that a prima facie case of obviousness has not been set forth. This is especially true considering that the claimed invention is directed toward solving problems associated with the potential of the floating body which is a problem unique to SOI structures.

In addition, Applicant notes that Williams does not teach the claimed circuit control network that is specifically designed for "modulating a potential voltage of said body". As shown above, with the non-SOI device described in Williams, the body is not floating and therefore the potential voltage of the body does not need to be controlled. Therefore, the circuit D9, D8 illustrated in Figure 13A of Williams does not modulate the potential voltage of the body. To the contrary, as described in column 9, lines 13-31 of Williams, the diodes D8 and D9 represent connections between the body and source and drains which allow the transistor M to act as a battery disconnect switch S4. There is nothing to indicate that the diodes D8, D9 perform any body potential voltage modulation in Williams and, to the contrary, these diodes simply allow the battery disconnect switch to properly operate. Further, Brady does not teach (and is not reference for teaching) a circuit that would allow a floating SOI body to be controlled. Thus, it is Applicant's position that the proposed combination of Williams and Brady also does not teach the claimed circuit control network that modulates the potential voltage of the body as defined by independent claim 14.

Therefore, since Williams and Brady are not properly combinable, and because neither reference teaches or suggests the claimed "RC discriminator" or the claimed "circuit control network", it is Applicant's position that independent claim 14 is patentable over the prior art of

10/631,098

record. Further, dependent claims 17 and 18 are also patentable, not only because they depended from a patentable independent claim, but also by virtue of the additional features they define. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

#### IV. Formal Matters and Conclusion

Replacement drawing sheets are being submitted simultaneously herewith to correct minor and obvious draftsman errors. More specifically, Figure 5 is corrected to add the connection to Vdd (which is correctly shown in Figure 6). In addition, Figure 6 is corrected to relocate the identification number 45 (which is correctly shown in Figure 5). Applicant submits that these draftsman-related errors are obvious to one ordinarily skilled in the art, and that these corrections do not present new matter. In view of the foregoing, the Examiner is respectfully requested to enter the replacement sheets within the application to allow the invention be properly illustrated.

In view of the foregoing, Applicant submits that claims 14, 15, 17-20, and 22, and 24-36, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to

10/631,098

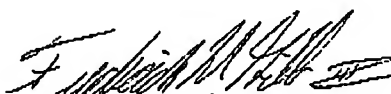
discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit

Account Number 09-0456.

Respectfully submitted,

Dated: 12-21-04



Frederick W. Gibb, III, Esq.  
Registration No. 37,629

McGinn & Gibb, PLLC  
2568-A Riva Road  
Suite 304  
Annapolis, MD 21401  
(410) 573-1545  
Customer Number: 29154